

Scientific Research Data Validation Survey Checklist

Data Source Verification

Confirm the integrity and origin of the data being validated.

Primary Data Source

- Direct Measurement
- Literature Review
- Existing Database
- Third-Party Provider

Source Identifier (e.g., DOI, URL, Database ID)

Data Acquisition Date

Version Number (if applicable)

Notes on Source Reliability and Potential Biases

Write something...

Data License/Usage Rights

- Open License
- Restricted License
- Proprietary Data
- Unknown

Data Entry Accuracy

Assess the precision of data input into the system.

Verify Recorded Numerical Value

Enter a number...

Check Recorded Text String against Original

Write something...

Confirm Date Entry Accuracy

Enter date...

Validate Time Entry Precision

Confirm Selection from Defined Options

- Correct
- Incorrect

Count number of entries with errors

Enter a number...

Unit Consistency

Ensure uniform usage of units of measurement throughout the dataset.

Primary Unit of Measurement (e.g., meters, kilograms)

- Meters
- Kilograms
- Seconds
- Radians
- Other (Specify)

If 'Other' specified above, what is the primary unit?

Write something...

Confirm use of SI units where applicable?

- Yes
- No
- Not Applicable

Conversion Factor (if units were converted)

Enter a number...

Describe any instances of inconsistent units and how they were addressed.

Write something...

Range Validation

Check data points against expected ranges based on scientific principles.

Observed Value

Enter a number...

Minimum Expected Value

Enter a number...

Maximum Expected Value

Enter a number...

Is Value Within Expected Range?

- Yes
- No
- Uncertain

Justification for Range Selection

Write something...

Notes on Value Deviation (if applicable)

Write something...

Outlier Identification

Detect and investigate unusual data points that deviate significantly from the norm.

Observed Value

Enter a number...

Expected Range (Lower Bound)

Enter a number...

Expected Range (Upper Bound)

Enter a number...

Potential Explanations for Outlier

Write something...


Impact on Analysis?

- Negligible
- Moderate
- Significant

Action Taken?

- Excluded from Analysis
- Corrected
- Further Investigation Needed

Supporting Documentation (e.g., raw data)

 Upload File

Metadata Completeness

Verify that all necessary metadata (author, date, instrument details, etc.) is recorded.

Principal Investigator Name

Write something...

Project Title

Write something...

Date of Data Collection

Enter date...

Sample ID

Enter a number...

Data Collection Method

- Manual
- Automated
- Remote Sensing

Instrument Model and Serial Number

Write something...

Notes Regarding Data Collection

Write something...

Calibration Certificates (if applicable)

 Upload File

Data Transformation Review

Evaluate any data transformations applied (e.g., normalization, calibration) for correctness.

Describe the data transformation applied (e.g., normalization, calibration).

Write something...

Specify the transformation parameters (e.g., scaling factor, offset).

Enter a number...

Was a standard transformation library or function used?

Yes

No

Upload the transformation script or code (if applicable).

 Upload File

Was the transformation reversible?

Yes

No

Not Applicable

Quantify the error introduced by the transformation (e.g., mean squared error).

Enter a number...

Software/Hardware Integrity

Confirm proper functioning of the software and hardware used for data collection and processing.

Software Version Number

Enter a number...

Hardware Serial Number

Enter a number...

Operating System

- Windows
- macOS
- Linux

Last Calibration Date (Hardware)

Enter date...

Time of Last Software Restart

Software Licensing Status

- Active
- Trial
- Expired

Documentation and Traceability

Check for clear documentation of data validation procedures and ability to trace back to original sources.

Date of Initial Validation

Enter date...

Validator's Initials/ID

Write something...

Detailed Description of Validation Process Followed

Write something...

Version Number of Validation Protocol Used

Enter a number...

Upload of Original Data Source File (e.g., raw data file)

 Upload File

Validation Method Used (e.g., manual, automated)

Manual

Automated

Related Project ID

Write something...

Compliance with Protocols

Verify adherence to established data collection and validation protocols.

Protocol Version Adherence

- Version 1.0
- Version 2.0
- Version 2.1
- Not Applicable

Number of Revisions to Protocol

Date of Protocol Implementation

Deviations from Protocol (if any)

Training Record Verification

- Records Verified
- Records Not Verified

Protocol Documentation

